



Reduced carcinogens. Premium taste.™

1R4F

The 1R4F reference cigarette, one of a series developed in conjunction with the University of Kentucky, serves as an international standard for scientific studies in a wide range of research areas. These reference cigarettes provide a convenient means to compare data collected from different commercial cigarettes and different research laboratories. The 1R4F cigarette was designed using a specific blend of different tobaccos to deliver approximately 11 mg of 'tar' and 0.8 mg of nicotine.

* Denotes Carcinogens

** Denotes Results Generated by Vector Tobacco

	FTC	Massachusetts Smoking Conditions	Canadian Intense Smoking Conditions
PAHs			
Benzo(a)pyrene (ng/cig)	4.58	8.5	11.5
Carbonyls			
Formaldehyde (µg/cig)	23.1	49.7	70
Acetaldehyde (µg/cig)	625	1421	1784
Acetone (µg/cig)	275	626	775
Benzon (µg/cig)	62.4	151	190
Propionaldehyde (µg/cig)	52.5	122	152
Valeraldehyde (µg/cig)	21.8	51.6	69.0
Butyraldehyde (µg/cig)	39.4	80.0	103
Methyl ethyl ketone (µg/cig)	90.0	206	254
Hydrogen Cyanide (µg/cig)	103.1	333	464.0
Carbon Monoxide (mg/cig)	11.8	23.9	30.6
Nitric Oxide (µg/cig)	238	472	615
Mercury	4.27	7.21	9.01
Trace Metals			
Cadmium (ng/cig)	37.6	76.1	92.8
Copper (ng/cig)	64.2	134.0	148.0
Arsenic (ng/cig)	5.8	12.7	15.3
Nitrosamines			
NNN (ng/cig)	114	221	281
NNK (ng/cig)	87	162	227
NAI (ng/cig)	109	189	283

NAB (mg/cig)	19.2	31.0	40.7
Semivolatiles			
pyrene (µg/cig)	4.53	22.5	39.5
2-vinylpyridine (µg/cig)	1.46	5.0	7.2
anthracene (µg/cig)	266	543	504
Phenols			
catechol (µg/cig)	39.0	87	85.9
phenol (µg/cig)	10.5	21	15.7
hydroquinone (µg/cig)	34.4	92	95.9
resorcinol (µg/cig)	0.64	1.45	1.54
2,4-dichlorophenol (µg/cig)	7.9	14	12.5
2,6-dichlorophenol (µg/cig)	3.10	5.38	4.7
Tar (mg/cig)			
Tar (mg/cig)	9.4	22.4	28.1
Nicotine (mg/cig)			
Nicotine (mg/cig)	0.78	1.7	1.9
Volatiles			
1,3-butadiene (µg/cig)	41.0	73.1	89.7
isoprene (µg/cig)	447	800	981
acrylonitrile (µg/cig)	10.9	24.1	32.0
benzene (µg/cig)	47.9	86.5	96.4
toluene (µg/cig)	90.4	181	205
styrene (µg/cig)	7.6	21.9	28.4

BQL = Below Quantifiable Limits
N.A. = Not Applicable

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